ICI MAGAZINE

PRICE TWOPENCE JUNE 1957

THE I.C.I. MAGAZINE

VOLUME 35 NUMBER 248 JUNE 1957

The *I.C.I. Magazine* is published for the interest of all who work in I.C.I., and its contents are contributed largely by people in I.C.I. It is edited by Sir Richard Keane, Bt., and printed at The Kynoch Press, Birmingham, and is published every month by Imperial Chemical Industries Limited, Imperial Chemical House, Millbank, London, S.W.1. Phone: VICtoria 4444. The editor is glad to consider articles for publication, and payment will be made for those accepted.

CONTENTS

FRONT COVER: *African Dawn, by Dr. C. C. Tanner (Central Agricultural Control)*

OUR CONTRIBUTORS

W. H. Billington *went to Kenya in* 1919 *after serving in the first world war. He joined the Magadi Soda Co. in* 1922, *was appointed general manager in* 1941 *and a director in* 1945. *He received the O.B.E. in* 1943, *and he is now Kenya Students' Adviser in London.*

Denise Shortall *is a* 20*-year-old laboratory assistant in the Analytical Section of Pharmaceutical Division's Research Department, which has recently transferred to Alderley Park. She has been with the Company for five years, but is leaving this summer to go to college.*

1956

By the Editor

The brief story of how the I.C.I. group fared in 1956 is one of increased sales (over one-third of the group's business is done abroad) but lower profit margins. Here is a digest of the Company's Annual Report, together with some abbreviated extracts from the "Review for 1956."

As the Chairman has said, the chemical industry had its difficulties in 1956. Credit squeeze, restriction on hire purchase, recession in the motor industry and the closing of the Suez Canal—all these did not make business any easier.

Nevertheless, "once again," says the Annual Report, "the Company's sales, both in value and volume, were a record; the value of the Group's consolidated sales at £435m., compared with £411m. in 1955, was also a record. The consolidated sales showed an increase of 5·9% over the previous year's figures, whereas in 1955 the increase over the figures for 1954 was 16·7%. *Although sales increased, profit margins were reduced owing to continued absorption by the Company of increased costs in pursuance of its policy of keeping the prices of its products as low and stable as possible.* The Group's manufacturing and trading profits for the year amounted to £53·4m. compared with £56·5m. for 1955."

After pointing out that home sales for the year were up on 1955 (except for Leathercloth and Metals Divisions, both considerably affected by the motor recession) and after referring to the easier position in raw materials, the Report goes on to explain further the reasons which led, despite higher sales, to lower profit margins.

"In the early part of 1956 the Company was faced with rising costs caused by increases in railway and road haulage charges, in the price of coal and coke, and in wages. Increased efficiency only partially offset these higher costs, and the Company had to increase the prices of a number of its products. Nevertheless, . . . these increases were insufficient to prevent profit margins being reduced.

"At the end of July, in response to the Chancellor of the Exchequer's appeal to help the fight against inflation, the Company informed its customers that it would make no further increase in the home trade prices of chemicals, dyestuffs, explosives, fertilizers, fibres, pharmaceuticals, paints and plastics until 30th June 1957 at the earliest, provided that no unexpected or exceptional happenings intervened and that there were no major increases in the cost of freight or fuel. At the date of this Report no increases have been made to the prices of the products covered by this statement."

All this led to a drop in the income of Imperial Chemical Industries Ltd. after tax which fell from £24m. to £19·3m.* Incidentally, it is worth noting that despite lower trading profits the Exchequer dipped into the I.C.I. kitty to almost the same extent as the previous year. The Company put aside last year, as in 1955, over £23m. for taxes. The reasons for this are principally the higher rate of profits tax and the withdrawal of certain special investment allowances on new capital expenditure.

So much for the main lesson of the past year. What are the other items of particular interest in the Report? I would set them down as follows:

Home and Overseas Trade. The accounts draw a clear distinction between the trading of Imperial Chemical Industries Ltd. and the trading of I.C.I. and its 91 subsidiaries known as the I.C.I. Group. It is perhaps not always realised what a very large part is played by the I.C.I. subsidiaries, most of whose business is overseas. The statistics of our overseas business are striking. Group sales to external customers in the United Kingdom were £243·7m.; group sales to external customers overseas were £191·6m. In other words, more than one-third of the group's business was conducted abroad.

Exports. These went up a little, from £71m. to £73m. The Report comments: "since 1948, when the value of exports was £37·5m., there has been a marked expansion both in the variety of exports and in the markets to which those exports have gone. An important proportion of the total exports of the Company is now represented by new products of high value; exports of plastics, for example, increased from £1m. in 1948 to £10m. in 1956.

"The proportion of the total exports of £73·1m. taken by the various overseas markets is shown in the following table:

	£ million
Europe	18·7
Middle East	4·3
India, Pakistan, Burma and Ceylon	12·4
Far East	6·3
Africa	9·6
North America	7·7
Central and South America	8·5
Australasia	5·6
	73·1

"Exports to Europe have increased by £9m. since 1948, and of this increase £7½m. is on account of newer products. The Directors are giving close attention to the proposal that the United Kingdom should be associated with the Common Market through a Free Trade Area. While it is appreciated that the implementing of this proposal will give rise to many problems, the Company nevertheless welcomes the opportunity which it will offer to expand its trade in this important market."

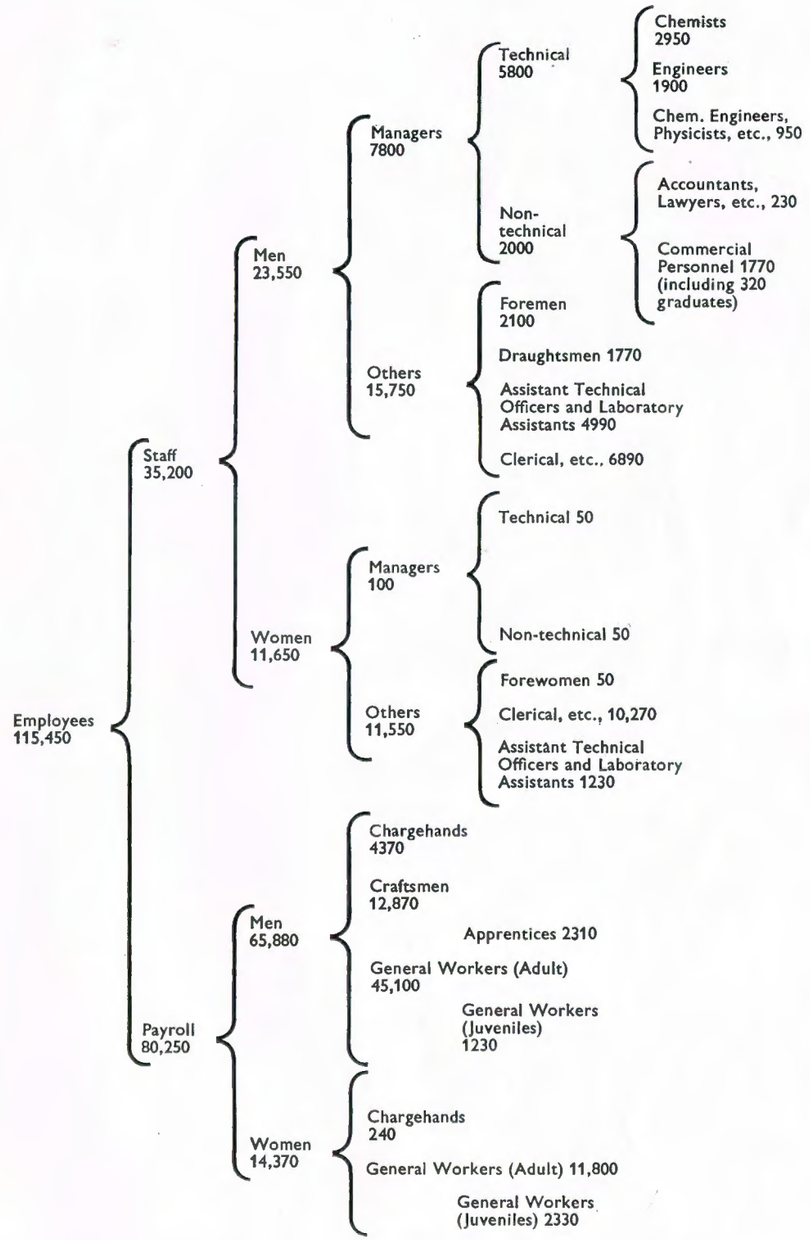
Capital Expenditure. This continues at a very high rate. It was £56m. for the group last year. Of

*All comparative figures unless otherwise stated refer to the previous year.

HOW I.C.I. FARED IN 1956

	1956 £m.	1955 £m.
*Group manufacturing and trading proceeds and income from investments, etc.	440·8	416·0
Disposed of as follows:		
Raw materials for production and maintenance, purchases for resale and payments for external services	257·9	243·2
Wages and salaries	99·0	89·4
Pensions and contributions to Pension Funds ..	7·1	6·6
Depreciation	23·5	20·4
Employees' profit-sharing bonus	3·1	2·8
Taxation	23·8	23·9
Retained for employment in the business	16·1	19·5
Distributed as net dividends	10·3	10·2
	£m. 440·8	£m. 416·0

*Group means I.C.I. and its subsidiary companies at home and overseas.



CLASSIFICATION OF EMPLOYEES, 31st December 1956

This modern plant at Blackley Works, *Manchester, is producing intermediates for other dyestuffs plants. In the manufacture of dyestuffs there are several intermediate stages between raw material and finished product.*

this, £44m. was spent by the parent company and the remaining £12m. by the subsidiaries. Incidentally, the total capital spent by the parent company since 1945 is the huge figure of £267m.

Research. This ran last year at £12m., just about 2½% of turnover, a rate which the Report describes as "similar to that of the more progressive American companies." On the subject of research, the Report has some interesting comments to make. After pointing out that approximately 40% of research expenditure was directed toward improvement of products and processes, that a further 40% was spent on work aimed at the discovery and development of new products and processes, and that the balance of 20% was accounted for by the provision of basic scientific and technical information, the Report continues: "There is clear evidence that the big effort which has been made to improve existing products and processes gives an adequate reward."

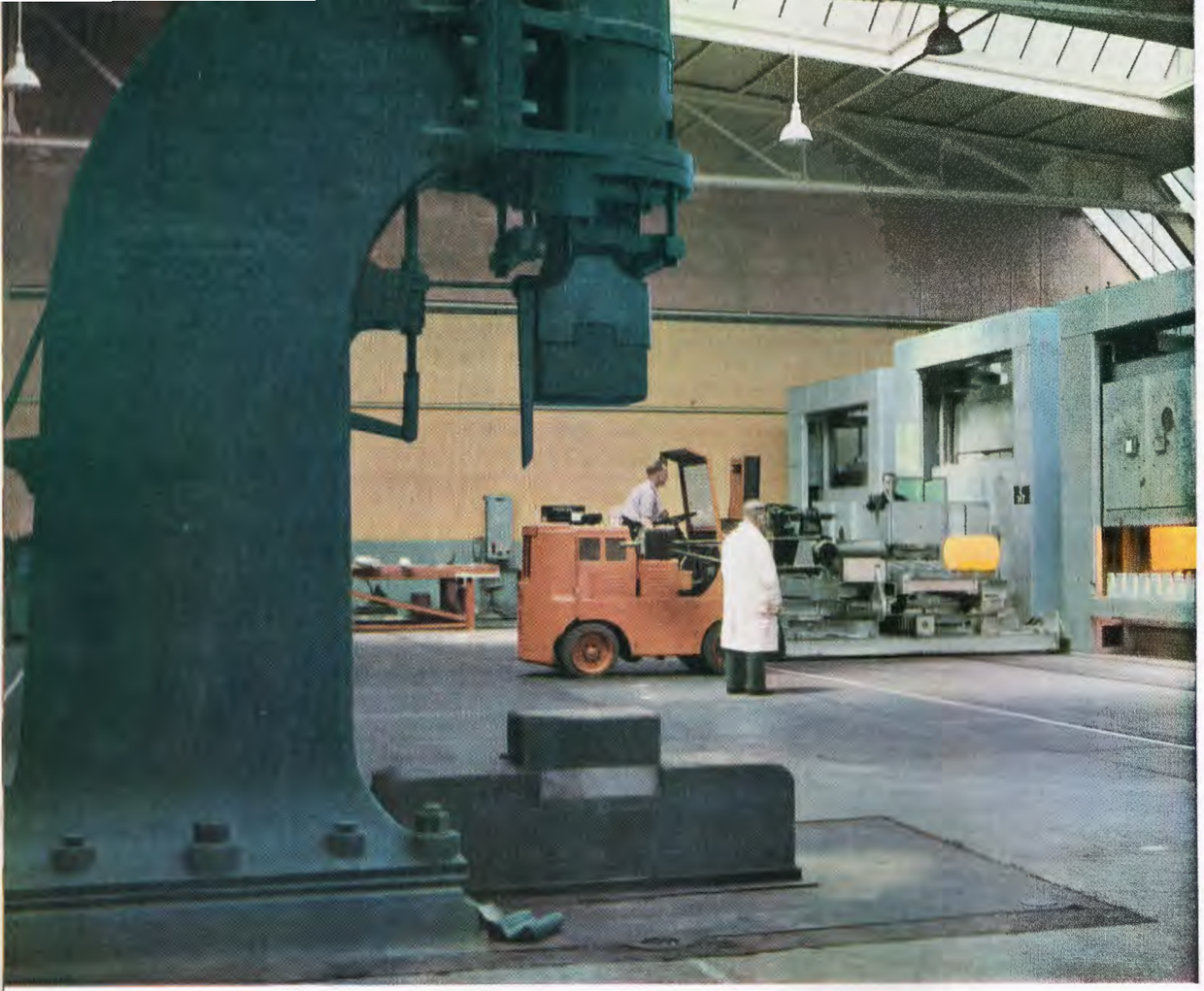
Commenting on the extremely high cost of discovery and development of new ideas, the report comments: "In some cases, such as dyes, pharmaceuticals and Plant Protection products, it can often exceed by a large amount the capital expenditure required for new plants, and profit margins on new products in this field must be sufficient to cover these research charges."

The most advanced of its kind in the world *is this plant for the continuous manufacture of nitroglycerine at the Ardeer Factory of Nobel Division. It will soon be operated entirely by remote control.*

Replacement of Assets Reserve. This is an interesting item. It is a reserve created because, in the words of the Report: "although depreciation will over the years suffice to write off the value of the asset at 1st January 1950, or its cost if acquired subsequently, it fails to provide in full for the total cost of replacing assets when the time for replacement comes. The full present-day replacement cost of assets in new condition is considerably in excess of the value at 1st January 1950 of the older assets, or the cost of many of the assets acquired since 1st January 1950." Therefore more money has to be set aside, money found out of taxed income. Our Directors put £7m., over one-third of the parent company's net income, into the replacement of assets reserve last year. With £9·2m. going out as dividends, this left only £3·1m. for other reserves.

Dividend. The ordinary dividend for 1956 remained unchanged at 10%. But it is interesting to note that the "gross ordinary dividend as a percentage of total group funds at year end applicable to ordinary stock holdings of Imperial Chemical Industries Ltd." fell from 4·9% in 1954 to 4·6% in 1955 and 4·3% in 1956.

Personnel. The numbers employed by the parent company remained constant last year at 115,000 in round figures. Of these 35,000 are staff and 80,000



A mechanical "hand" *reaches into a furnace at* 1000° *C. to extract a red-hot titanium ingot for forging under the two-ton hammer in the Metals Division's forge at Witton, Birmingham*

payroll. The Report adds: "In 1956 the Company recruited 435 professionally qualified scientists and engineers. This number was all that could be recruited without reducing standards."

This year the usual account of the activities of the Divisions and overseas companies is printed in a separate publication called "Review for 1956." Some of the salient points in the Review are:

Alkali Division. Home sales of alkali products 9% greater in value and exports also a new record, due mainly to large shipments to Brazil. New plant for granular soda ash erected. Also new plant to make 'Winnofil,' a form of calcium carbonate used as a filler to improve wearing qualities of coloured rubber and as an ingredient of paints. 'Alkathene' sales up by 33% in value despite price reduction.

General Chemicals Division. Sales 3% higher in value, and both volume and value of exports greater. Rail tank wagons introduced which operate on both British and Continental systems, so enabling liquid products to be exported in bulk direct to many parts of Europe. A new and improved anaesthetic, 'Fluothane,' developed in G.C. laboratories. Development quantities have been made available to medical profession and a small production plant has come into operation.

Two new rotary kilns *at the Tunstead Works of Lime Division, which have been installed to convert washed small limestone into new and better qualities of lime*

Lime Division. Sales of all main products reached record levels. Second rotary kiln brought into operation at Tunstead.

Salt Division. Sales maintained high level achieved in 1955. Increased sales of the new forms of vacuum salt. About a quarter of Division's output exported.

Dyestuffs Division. Total sales up by 6% in value —a record. Home sales increased by 3% in value and overseas sales by 10%. Overseas sales now represent more than one-third of Division's total turnover. Construction of new nylon polymer plant at Wilton well advanced. World-wide demand expected for new 'Procion' range of dyestuffs. Research and development work done on isocyanates, a group of chemicals forming basis of flexible or rigid foams, hard, heat-resisting surface coatings, or rubber-like materials. They have many potential uses in boat-building, for increased buoyancy; in building, for thermal insulation; and in the plastics and paint industries. Production on pilot plant scale last year. Much larger plant now in commission.

Pharmaceuticals Division. A difficult year, although sales measured by volume reached record levels both at home and overseas. Exports now account for more than 65% of total turnover, but

intense competition meant low prices. Greatly increased sales of 'Mysoline,' which is now making a major contribution to the treatment of epilepsy.

Billingham Division. Many sections achieved record outputs, and turnover increased by nearly 13%. Considerable extensions to capacity for 'Nitro-Chalk' and Concentrated Complete Fertilizers planned. Cost of boiler and coking coal matter of serious concern to Division, which consumes large quantities of coal both for processes and for steam and power generation. Division planning to use oil rather than coal in new ammonia plant which will start operating this year. Manufacture of petrol by the hydrogenation of creosote oil discontinued for economic reasons, which means that a large quantity of hydrogen is freed to make a further 60,000 tons of ammonia a year.

Central Agricultural Control. Notable report published after trials establishing for first time relationship between amount of fertilizer applied to pasture and yield of milk from grazing herd. Special Work Study section set up.

Wilton Works. Over £65m. already spent on the 2000-acre site. Capital expenditure in 1956 on the site amounted to £14m.

Metals Division. A difficult year, sales being affected by the credit squeeze and the recession in motor industry. Orders of wrought titanium increasing slowly. Titanium is beginning to be used more widely in civil aircraft, chemical plant and engineering. Output of tubes reached record figures, and overseas sales increased by more than 80%. Research is being devoted to investigating potentialities of zirconium, likely to be in demand in wrought forms for use in nuclear power plants.

Nobel Division. Sales remained at a high level throughout the year. Further efforts being made to eradicate hazards of explosives manufacture. Nobel Research Department is devising an electronic circuit which controls process machinery in such a way as to make electrical equipment inherently incapable of causing fire.

Paints Division. Home sales appreciably higher than 1955 record, in spite of the credit squeeze. New technical service laboratory in course of construction at Slough.

Plastics Division. Total sales of plastics increased by 11% in value, but profit margins lower. Sales to home market rose by nearly 4%, to export market by 25%. Sales abroad now represent 35% of I.C.I.'s output of plastics. Demand for polythene film increasing, and the manufacturing capacity of I.C.I.'s subsidiary, British Visqueen Ltd., increased. New technical service development laboratories opened at Welwyn Garden City.

PROFIT AND LOSS ACCOUNT OF IMPERIAL CHEMICAL INDUSTRIES LIMITED FOR THE YEAR ENDED 31st DECEMBER 1956

1955			
£		£	£
278,294,900	**SALES to External Customers and to Subsidiaries**		291,548,328
42,196,628	**MANUFACTURING and TRADING PROFITS** *less* **LOSSES** after charging the items inset below		38,203,149
	1955 £ 16,101,841 **Depreciation** — £ 18,381,519		
	4,778,525 **Contributions to Pension Fund, Pensions and Gratuities** (Note 1) — 5,120,835		
	37,470 **Audit Fees and Expenses** — 40,173		
2,731,829	**Revenue from Subsidiaries**		2,424,435
1,631,999	**Revenue from Associated Companies**		1,830,142
277,961	**Revenue from Marketable Investments and other Securities**		141,526
313,366	**Interest and Miscellaneous Income**		178,988
47,151,783			42,778,240
		£	
2,158,839	*Less:* **Fixed Loan Interest**	2,155,829	
232,983	**Other Loan Interest**	251,111	
2,391,822			2,406,940
44,759,961			40,371,300
2,576,799	*Less:* **Provision in respect of Employees' Profit-Sharing Scheme**		2,928,892
42,183,162	**INCOME BEFORE TAXATION**		37,442,408
18,205,999	*Less:* **Taxation** provided on the basis set out in Note 2		18,149,269
£23,977,163	**INCOME OF IMPERIAL CHEMICAL INDUSTRIES LTD. FOR THE YEAR AFTER TAXATION**		£19,293,139
	RETAINED IN THE BUSINESS		
	CAPITAL RESERVES	£	
7,000,000	Obsolescence and Replacement of Assets	7,000,000	
3,000,000	General	2,500,000	
10,000,000			9,500,000
	REVENUE RESERVES		
	Stock Replacement (1956-Transfer from; 1955-Transfer to)	*750,000*	
3,000,000			
1,840,404	General	1,348,898	
4,840,404			598,898
14,840,404			10,098,898
	NET DIVIDENDS PAID AND PROVIDED		
	Paid		
484,564	(a) 5% Cumulative Preference Stock, half-year to 30th June 1956	484,564	
3,267,052	(b) Ordinary Stock, Interim Dividend 4%	3,290,045	
3,751,616			3,774,609
	Provided		
484,564	(a) 5% Cumulative Preference Stock, half-year to 31st December 1956	484,564	
4,900,579	(b) Ordinary Stock, Final Dividend 6%	4,935,068	
5,385,143			5,419,632
9,136,759			9,194,241
£23,977,163			£19,293,139

GROUP PROFIT AND LOSS ACCOUNT OF IMPERIAL CHEMICAL INDUSTRIES LIMITED AND 91 SUBSIDIARIES FOR THE YEAR ENDED 31st DECEMBER 1956

(1955 figures cover ICI Ltd. and 97 subsidiaries)

1955			
£		£	£
411,017,648	**SALES to External Customers**		435,318,680
56,485,871	**MANUFACTURING and TRADING PROFITS** *less* **LOSSES** after charging the items inset below		53,445,008
	1955 £ 20,379,824 **Depreciation** — £ 23,459,049		
	6,629,400 **Contributions to Pension Funds, Pensions and Gratuities** (Note 1) — 7,106,298		
	101,961 **Audit Fees and Expenses** — 108,847		
2,395,479	**Revenue from Associated Companies**		2,621,523
449,073	**Revenue from Marketable Investments and other Securities**		304,630
491,829	**Interest and Miscellaneous Income**		378,551
59,822,252			56,749,712
		£	
2,953,000	*Less:* **Debenture and Fixed Loan Interest**	2,957,883	
456,700	**Other Loan Interest**	523,747	
3,409,700			3,481,630
56,412,552			53,268,082
2,833,467	*Less:* **Provision in respect of Employees' Profit-Sharing Scheme**		3,146,643
53,579,085	**INCOME BEFORE TAXATION**		50,121,439
23,900,433	*Less:* **Taxation** provided on the basis set out in Note 2		23,764,834
£29,678,652	**INCOME OF THE GROUP FOR THE YEAR AFTER TAXATION**		£26,356,605
	RETAINED IN THE BUSINESS		
	By Subsidiaries		
729,726	Applicable to Minority Members	1,055,449	
3,872,898	Applicable to Imperial Chemical Industries Ltd.	4,878,598	
14,840,404	**By Imperial Chemical Industries Ltd.**	10,098,898	
19,443,028			16,032,945
	NET DIVIDENDS PAID AND PROVIDED		
1,098,865	**By Subsidiaries to Minority Members**	1,129,419	
9,136,759	**By Imperial Chemical Industries Ltd. to its Members**	9,194,241	
10,235,624			10,323,660
£29,678,652			£26,356,605

I.C.I.'s profit and loss accounts as published on pages 18 *and* 19 *of the Annual Report*

Leathercloth Division. Sales greatly affected by credit and hire purchase restrictions and recession in motor industry, but the Division kept its place as leading supplier at home, while increasing business abroad. With production of 'Vynair,' Division pioneered first high-quality coated fabric that "breathes."

Fibres Division. Sales of 'Terylene' staple doubled. Spectacular increase in sales of 'Terylene'-wool mixtures for worsted fabrics. Sales of 'Terylene' filament yarn up by 80%, one of largest increases being in net curtains. Direct exports of 'Terylene' nearly trebled and many new markets opened up.

One man and his job—52

Lorry Driver

It was barely light as I left Billingham with Ted Harper. Five a.m. seemed an odd starting time to me, but it was nothing new to Ted, already settled at his wheel with the easy air of a Sunday motorist out for the afternoon.

We were heading for Wolverhampton—186 miles with a tank load of Billingham's argon gas for the welders of Marston Excelsior Ltd., a subsidiary of Metals Division.

It was trouble-free running along the early morning roads, with misty fields on either side. Then Ted said: "We'll meet the trunkers in a minute or two." He was right. Lorry after lorry began to pass us going in the opposite direction, nearing their Tees-side destinations after a routine night's drive from London.

Most of us think of lorries as haphazard things, the odd-job men of transport; but under Ted's tuition I began to see that long-distance lorries move to patterns as regular and romantic as those of ships and trains. The roads, too, it seems, hold their men like the sea.

"Sometimes," Ted told me, "you get a chap back from a long run on a winter's night; he has had fog and the lot, and he vows he is finished with the job. So he might be. For a few months he might drive a local taxi or bus. But they come back to long distance. Once it has got a hold, you cannot give it up." Ted himself, except in the Army, has driven since at 17 he took a taxi towing a trailer round the farms collecting milk cans. It seems a long way from that, though, to a load of vinyl chloride, together with the vehicle weighing 24 tons, that he now takes in his stride. Fierce-sounding loads, with "inflammable" or some such warning painted on the tank, do not bother him either. "A load of nitric acid at your back weighs on your mind the first time or two," said Ted, "but soon it is just routine."

We drove on after a stop for breakfast at a transport café, and Ted told me the things he liked about his job. What he liked most, it seemed to me, was the freedom of the open road and the fields on either side. One of Ted's favourite runs is with liquid carbon dioxide through the lovely Pennine and Lake District passes to Calder Hall atomic power station.

"But wherever you are there is plenty to see," he said, and he proved it by being a mine of information and anecdote about the places we passed.

Some people might think long-distance driving would be monotonous. They should try a trip with Ted Harper.

Nor does Ted find it a lonely job, for the roads have their own fellowship. He exchanges a wave with many a fellow driver he has passed countless times but never spoken to. This friendliness, he finds, is especially strong at night, when passing vehicles show double the courtesy.

There is friendliness, too, in the transport cafés, and in the night lodges where the drivers stay when away from home. There Ted meets the same colleagues over and over again. "Once you know a good lodge in a town you keep to it," he said.

Strategically placed up and down the country he has his own tried and proved lodges, and off goes a telegram to the appropriate one when he knows his run. But lodges are not everything, of course—they are certainly not home, and home with his wife and three children is what Ted really looks forward to after a long run.

I asked him what his wife thought of a typical week he had described to me. It was made up of journeys from Billingham to Wolverhampton with argon, back to the factory, and next day away to Calder Hall with carbon dioxide, then back again, and off to Huntingdon with nitric acid and back again; nearly 800 miles driving, three nights away from home.

"Naturally, it is not her ideal," said Ted, "but she accepts that it is just that kind of job."

By then Ted and I were in the Midlands. Not much left of the open road, but town after town and a steady stream of traffic. Lunch next, and then we were unloading our argon at Wolverhampton. An hour or two more and Ted was at his lodge for the night, reading the paper after tea, perhaps chatting to another driver or going to the cinema.

One more night away from home—but another valuable load safely delivered on time. And throughout the night no doubt Billingham was hard at work making more products for Ted's next trip. D.H.

Ted Harper

THE COMMON MARKET CHALLENGE

By J. L. S. Steel (Economic Planning Director)

The European common market offers big opportunities. But it means the abandonment of the duty (generally 33⅓%) levied here on imported fine chemicals and on a wide range of synthetic organics. It means, too, the abandonment of the protection of our dyestuffs industry. How will the chemical industry meet this challenge?

This article is a shortened version of one that appeared in the Sunday Times *last month and is reprinted by kind permission of the Editor.*

FREE trade over a wide area in Western Europe is a challenge to the chemical industry of this country. Chemical manufacturers in Germany and Italy, for example, will undoubtedly do their utmost to extend their output and sales. *Competition will be keener, not only in the West European continent, but in our home market too. Can we successfully meet the challenge? I am sure we can.*

First a word about raw materials. The main raw materials of the basic chemical industry—coal, salt, limestone, water—are fairly evenly distributed among the countries of the region. There is no special advantage there for anyone, apparently. But this country is fortunate in that these materials are grouped near together and in proximity to an unrivalled distribution system through some of the great ports of the world.

Given equal access to raw materials, success in the chemical industry depends on many things. Probably the most important are inventiveness and the rapid development of new processes combined with competent, progressive and enterprising management. This country can lay no claim to a monopoly of these things, but its record over the last 20 years has been impressive.

New plastics like polythene and 'Perspex,' new drugs like 'Paludrine' and 'Mysoline,' new pigments and dyestuffs like 'Monastral' Blue and the 'Procion' colours, have all been discovered and developed here. Continuous technical progress has also been made in the older-established products and processes, and productivity has consistently and rapidly increased. Free enterprise in the chemical industry has shown itself to be truly enterprising. *The industry has no reason to fear fair competition from others in the Free Trade Area.*

"Membership" of a large Free Trade Area also gives a new opportunity of increased volume of business.

Europe, considered as a group territory, is already the largest export market for the chemical industry of the U.K. 25% of the U.K. exports of chemicals go there. As is well known, the exports of chemicals from the U.K. to the outside world have shown a steady and striking increase since the war, but the export territory which has grown most rapidly is that of Western Europe. One of the most striking things, too, in international trade since the war is the manner in which trade between the great manufacturing "developed" countries has grown. The rate of increase in the trade between them has been markedly higher than the rate of increase in trade between "developed" and "undeveloped" territories. Trade in chemicals follows the same trend.

Trade in chemicals in Western Europe should therefore grow on two counts. First we can expect trade between "developed" countries to continue to grow at a high rate. Secondly, we can expect that the economy of Western Europe as a whole will benefit from the Free Trade proposals as they come into being. If this hope is realised it will inevitably bring in its train an increasing demand for, and trade in, chemical products.

The possible effects of the Free Trade Area should, however, not be exaggerated. Even if British chemical exports to Europe were to double over the next ten years it would mean no more than a one-sixteenth increase in the total volume of chemical production in the U.K.—a small fraction of the expected total growth in overall requirements in the next decade.

It will mean, though, that in planning extensions of existing plants or the production of new products, attention will have to be given to the possibilities of a home market much greater in area than the present one. Of equal importance will be the strengthening of the local sales and service organisations of British manufacturers selling in Western Europe.

The chemical industry will gladly and eagerly grasp the opportunities which may offer.

I.C.I.'S MOSQUITO FARM

By Dr. G. Irvine Robertson

Home-bred mosquitoes at £5 an insect were used in East Africa for these clinical trials on man of antimalarial drugs. Thus conclusive evidence of the precise value of I.C.I.'s antimalarial drug 'Paludrine' was obtained.

FOR SALE: *Giraffe* £400, *White Rhinoceros* £8000. Such advertisements appear from time to time in the African press, but *Mosquitoes £5 each* is rarely seen; yet £5 must have been the cost to the Pharmaceuticals Division of each malaria-infected mosquito produced in its Nairobi laboratory, where much knowledge has been gained during the last six years as to how 'Paludrine' and other antimalarial drugs can best be used.

Native volunteers taking part in antimalarial trials

As more and more drugs are produced to control diseases, the target for new drugs becomes narrower. Nowadays the efficiency in a particular disease of what was a new drug in 1954 is not necessarily so far behind the latest drug of 1956. To ensure that the new drug of 1956 is an advance on the old can be a very lengthy process.

To obtain information about antimalarial drugs Pharmaceuticals Division has maintained a clinical trials unit in Nairobi for six years. There, European and African volunteers have been bitten by large numbers of mosquitoes known to be infected with malaria. Before being bitten, they were given various doses of the drugs under test. They were then observed carefully to see whether malaria *did* develop or whether the drug was able to protect them.

To start this unit it was essential to have large numbers of infected mosquitoes, and to obtain them in a suitable condition they had to be specially bred there. The right type of mosquito had defied numerous previous attempts to breed it in captivity, but Harold Moores of Pharmaceuticals Division eventually succeeded in establishing a healthy colony. While Mr. Moores was striving to breed mosquitoes, practically everyone else in Africa was trying to do the reverse. Draining, oiling, residual spraying, aerosol sprays, hand sprays, motor, aeroplane and helicopter sprayers, D.D.T. and 'Gammexane' are merely some of the weapons used.

How were these tests carried out? A few of the mosquitoes likely to be infected were sucked up from a cage into a glass pipette and then blown into a glass pot with netting over one end. This pot was then laid on the arm of the volunteer, who had already been given a prescribed dose of the drug under test. If the mosquitoes were hungry, they jabbed their probe into him and sucked up his blood until they were engorged. This blood could be seen in their stomachs with the naked eye and was proof that the mosquito had actually bitten.

Mosquitoes which had blood in their stomachs were then dissected and checked for the carrying of malarial parasites. In the infected mosquitoes malarial parasites could be seen in their salivary glands as hundreds of little rods.

In this way it was made certain that all volunteers had actually been exposed to infection.

Often in tropical countries where efficient diagnostic services are rare, any fever, such as influenza, is labelled "malaria" and the antimalarial drug is blamed for not preventing it. The correct diagnosis can only be made by a microscopic examination of the blood and the identification of malarial parasites. In this unit good microscopes were in use; the blood films were made in duplicate, specially stained, examined and cross-checked by well-trained staff. All true cases of malaria were recognised at once and no odd fevers due to a so-called failure of the antimalarial drug were diagnosed as malaria. By such precise methods a reliable assessment of drugs old and new was made.

Garden Notes

By Philip Harvey

Decoration by Dorothea Braby

ALTHOUGH plantains, daisies and creeping buttercup are probably the most common lawn weeds, clover and yarrow can be equally troublesome in some gardens. There are, however, certain misguided people who encourage clover because they think it "looks nice." I am quite indifferent to the aesthetic appeal of clover, and I have in any case always found that the blades of the mower slide over this weed.

I am told, but cannot confirm from personal experience, that both clover and yarrow can be scored with a sharp knife in much the same way as a butcher scores a leg of pork. The butcher makes a cut about a quarter of an inch deep across the skin before roasting; the gardener is advised to make sharp cuts across the patches of clover in different directions and on numerous occasions. But how incredibly tedious!

The up-to-date answer is to use a hormone selective weedkiller such as 'Verdone' at one-third the normal rate and to give three applications at fourteen-day intervals. The idea behind this reduced strength is to get some weedkiller into the plant to check growth but without removing the top foliage, which will then remain to absorb further applications.

Incidentally, clover is encouraged by the use of basic slag, and if you intend to give your lawn a top-dressing of phosphates avoid this fertilizer. Bonemeal or superphosphate of lime is an excellent alternative.

Yarrow increases by means of underground stems and can be very persistent despite close mowing. It will, however, eventually succumb to treatment with 'Verdone' as recommended for clover.

Selective weedkillers do not kill moss, and sodium chlorate is equally ineffective. One remedy is to apply a tar-oil winter wash such as 'Abolene,' using 1 pint of wash in 16 pints of water. Alternatively, you can use sulphate of iron at the rate of ½ oz. in 1 gallon of water. In both cases there will be some yellowing of the grass, but it soon recovers. The dead moss should be raked out and the lawn fed with a complete fertilizer, i.e. one containing nitrogen, phosphates and potash.

Do not rake out the live moss, as the grasses are easily damaged. Mosses can increase by means of special buds, which are readily separated from the parent plant when raking.

Will cultural methods prevent future invasions of moss? A damp, hard surface often accounts for this trouble, and excessive surface moisture is probably the underlying reason. Sand or charcoal will improve drainage. Nevertheless there is generally no one explanation, as moss can be found on all types of soil, in dry positions and in shady corners.

The tall bearded irises (or flag irises as they are sometimes known) are ideal plants for town gardens, as they will grow well and bloom freely even in smoky areas. Further, they are completely hardy and drought-resistant. Experts disagree about the ideal planting times, some advocating moving immediately after flowering, others advising mid-July to September. Early spring planting is also feasible, but there may be no flowers in the first season.

A sunny position and a light to medium, well-drained soil are essential. On light, sandy soil drainage will take care of itself, but on heavy, damp ground a raised bed may be necessary. Rich ground is unnecessary, as these irises will give good results on relatively thin soils.

Firm, *shallow* planting is equally important. Never bury the rhizomes: the tops should be just visible above the soil. Plant not less than 1 ft. apart, otherwise the clumps may become congested. If the rhizomes are pointed to the south when planting they will receive the maximum sunlight.

There is a bewildering choice of varieties in a very wide colour range. During recent years a number of pinks have been introduced. Without exception they are all very beautiful and no more difficult than varieties in blue, purple, yellow and other standard colours. Examples are Pink Cameo, Loomis V20 and Spindrift.

Other dependable varieties include Mabel Chadburn (bright yellow), Great Lakes (pure sky-blue), Lilias (strawberry-pink and gold), Senlac (mulberry-red) and Deep Velvet (rich royal purple). For a white there is Gudrun or the extra tall White City, which grows 4 ft. high.

The only snag about the tall bearded irises is the comparatively short period of bloom. Catalogues sometimes point out that they fill the gap between tulips and roses; but this rather begs the question, as where space is limited one is reluctant to devote an entire border to irises alone. You can, of course, have clumps in a herbaceous border, but the growths will hardly ripen properly if they are shaded by other plants.

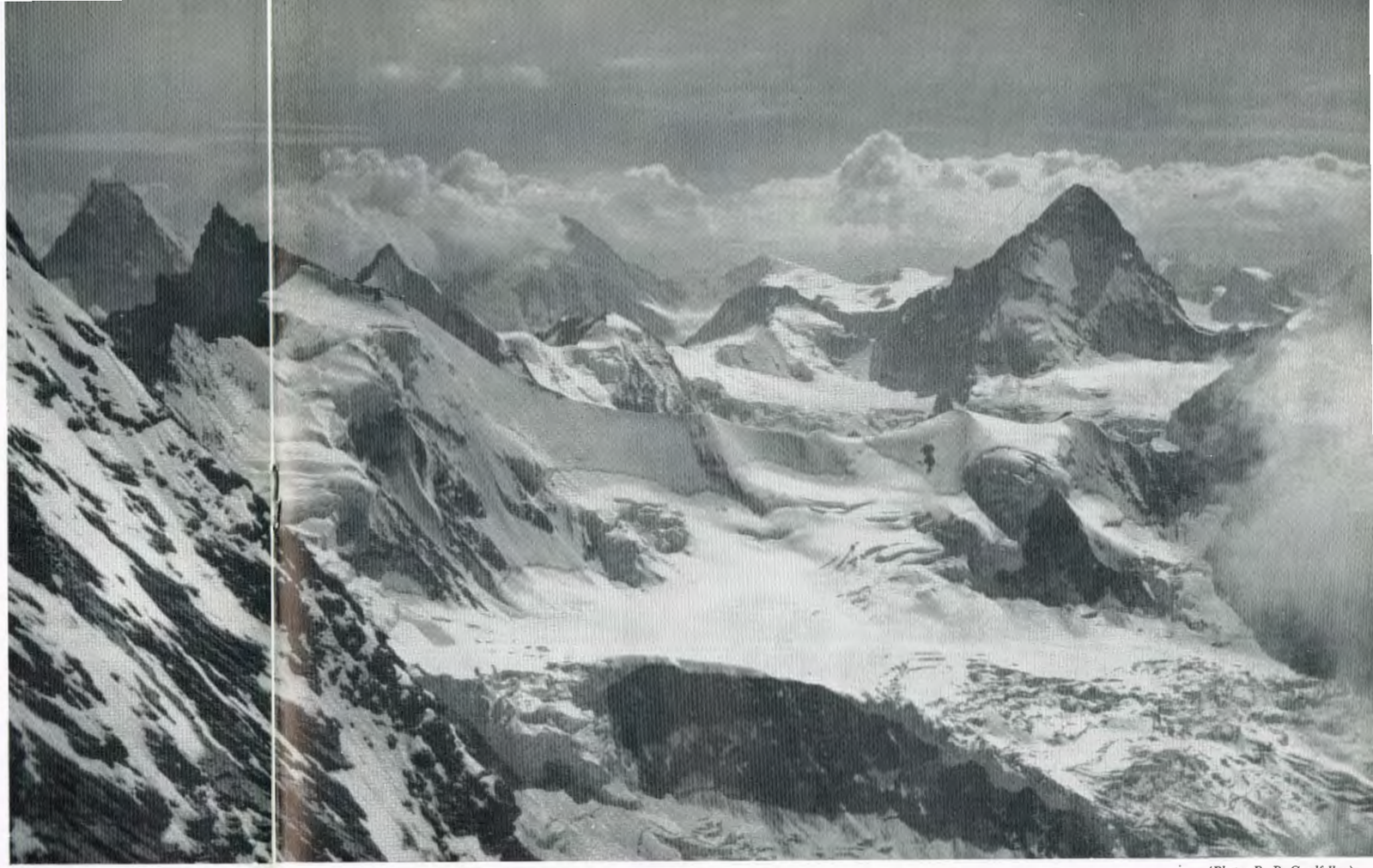
A better plan is to interplant with antirrhinums, single asters or even gladioli to ensure a succession of bloom. For a background I would suggest a hedge of *Cotoneaster Simonsii*, which is semi-evergreen, erect-growing, colours well in autumn and bears a good crop of scarlet berries throughout the winter. The yellow-flowered *Berberis stenophylla* is also suitable, although very prickly.

Ants are probably more abundant on light, sandy soils than on heavy, sticky land. These pests do not destroy the aphids on your roses or other plants, as they are simply "milking" the aphids for their sweet excretion known as honeydew. A BHC insecticide will kill ants, but repeated applications are usually needed to deal with new infestations. Gardeners who complain that a particular insecticide has failed to destroy ants because they return to the same spot a couple of hours later and find hordes of ants still there, seem to forget that they are witnessing a fresh invasion.

My Matterhorn

By Denise Shortall

For these two girls the snow-covered mountains of the Alps held no terrors. Without guides (an example not to be followed) they conquered six peaks, including the famed Matterhorn, in a fortnight's holiday.



The Zermatt range of Alpine peaks. *On the far left is the Matterhorn and next to that the Rothorn. The prominent peak on the right is the Dent Blanche.* *(Photo: B. R. Goodfellow)*

My friend Rie Leggett and I were faced with a problem. Now that two of our party of four had had to drop out, dare we carry on with our plans of an all-female expedition to the Alps? Supposing I fell down a crevasse, who was going to help Rie to fish me out? We encouraged each other with the thought that such things happened only in the newspapers.

So with ego bolstered by much flattery of our ability (did our friends really wish to get rid of us?), and armed with notes and translations of the climbing routes on almost every Zermatt peak, we sallied forth. One cloud, however: I overheard an experienced mountaineer say "Of course, we shall have to hire a guide, there are only two of us going to the Alps, and you know how dangerous it can be on the glaciers." Even so, by not telling this to Rie I still had left one confident member of the party!

We watched with bated breath while our assortment of rucksacks, boots and ice axes were weighed, and sighed with relief when, to our amazement, we had not any excess. We could not have paid for it if we had, as all the extras such as coach tickets and airport tax made flying an expensive pastime. Several hours later, sitting in comfort and eating an enjoyable meal, I decided it was worth while, especially when the lights of Paris were spread out like a map below us, clearly showing the Arc de Triomphe and Eiffel Tower. Looking around at our fellow passengers we recognised Sir John Hunt and took his presence to be a good omen for our holiday.

The final stage of our journey was on a rack railway from Visp. Eventually the train pulled to a halt with an air of finality. We clambered out, to find that we were in a village called Tasch, and due to an avalanche higher up the line we would have to wait there for several hours. This was far too long for us to contain ourselves, and so, after a brief glance at the guide book, we set off for the Tasch hut.

Three and a half hours and one storm later we were receiving a friendly handclasp from the guardian, but his disapproval was evident when he discovered that we were going to climb without a guide. The hut belonged to the Swiss Alpine Club and was perched 9000 ft. up in the mountains. It was very snug inside, the stone walls being lined with wood. We slept soundly to make up for our previous night of travelling and did not awaken until 6 a.m., to find that the clouds were down past the hut.

Rather than waste a day we plodded up through deep soft snow to a col (just for training!), where, when there was a lull in the whirling snow, we had a brief glimpse into the next valley. The cold quickly drove us back, and we slithered down the slopes which had taken so much effort to climb. On reaching the hut we were embraced by the guardian, and were touched to find that he had been watching us during the day through his binoculars.

The next day we hoped to climb the Rotengrat ridge on the Alphubel, and were glad to find that two other parties staying at the hut were going to do the same route. The clouds were down again, but at 5.30 a.m. the guardian declared it fine enough to start, and so we rapidly swallowed some breakfast and set out. A few hours' climbing up a steep boulder-strewn path, and then at long last we were tying on the rope at the foot of our first Zermatt peak. As we gazed around we had our first view of the Matterhorn as it peeped above its mantle of clouds, and our hearts failed us when we saw the amount of new snow on it.

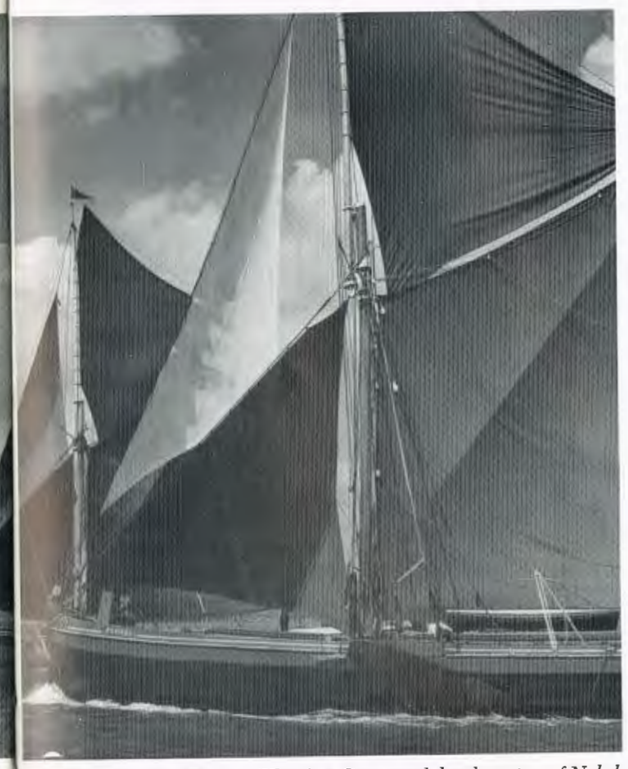
Of the Alphubel I have a vivid impression of interminable rock ridges which were covered with a layer of snow and ice, so making the climbing much more

NEWS IN PICTURES

Royal Visitor. *On 2nd May Queen Elizabeth, the Queen Mother, toured Metals Division headquarters at Witton. Above: The Queen Mother chats to 21-year-old Margaret Blewett, an assembler in the Lightning Fastener factory (Photo:* Birmingham Despatch and Mercury). *Below: Leaving the General Office on her way to the Strip Mill*

Witton skyscraper, *a ten-storey office block recently completed at Metals Division headquarters. The building, which is* 150 *ft. long and* 120 *ft. high, houses between* 400 *and* 500 *personnel. Offices ar formed of movable partitioning faced with I.C.I. leathercloth*

Sailing barges retire *Division's sailing barge part in the famous Thame ex*



At the end of July Denton Wharf at Gravesend, headquarters of Nobel fleet, is to be closed. Above: One of the barges, "Revival," taking sailing barge race. The barges have been used since 1912 *to carry losives from Nobel coasters to ocean-going ships*

Benny Edwards, *a draughtsman in the Chief Engineer's drawing office at Billingham, was outside left in the record-breaking Bishop Auckland amateur soccer side at Wembley in April. With this latest success he now holds four F.A. Amateur Cup medals—three winners' and one runner's-up*

Half a century's service with the Company was recently completed by **Mr. William Butler** *of Marsh Works (G.C.D.). Billy started work in* 1906 *sculling employees across the St. Helen's Canal to the United Alkali Co.'s Hutchison Works, and except for* 14 *years at Pilkington-Sullivan Works his working life has been spent with the Gaskell-Marsh group*

New mayor of Widnes is **Mr. A. Williams,** *who retired as librarian of General Chemicals research department in* 1955 *after* 31 *years' service with the Company. He succeeds another I.C.I. mayor, Mr. H. P. Minton, an employee at Pilkington-Sullivan Works*

Chairmanship of the Runcorn U.D.C. has for the third year in succession gone to an employee of Castner-Kellner Works. Chairman for 1957–8 *is* **Mr. George Wright,** *a bricklayer in the Estates Department. He has been a council member since* 1950

Veterans. *Sir Alexander Fleck photographed with the seven members of Head Office staff who received awards for 40 years' service at a recent ceremony at Millbank. Between them they represent over 300 years' service*

Lord Mayor's visit. *The Lord Mayor of Manchester, Councillor Harry Sharp, J.P., toured Hexagon House in April. Left: In the dyehouse Mr. G. Temperley explains a detail in a papermaking demonstration. L. to r.: The Lord Mayor, Lady Mayoress, Mr. Temperley and Mr. H. Jackson (Division Joint Managing Director)*

1000-mile marathon. *Three Basque athletes who walked from the Pyrenees to London as part of a publicity campaign to advertise Moccasin Iowa shoes photographed walking over Lambeth Bridge. I.C.I. rubber chemicals are used in the soles of the shoes*

At the Stock Exchange. *I.C.I. Profit Sharing trustees and mem Sharing Scheme were photographed (above) with Sir John Braith Hoare, senior partner of I.C.I.'s principal brokers (6th from left),*

bers of Head Office Pensions Department who run the Profit waite, Stock Exchange Chairman (5th from left), and Mr. Chris when they visited London Stock Exchange last month

'Drikold' at Covent Garden. *Among props for the new ballet "Prince of the Pagodas" is I.C.I.'s 'Drikold,' used to produce the clouds of vapour through which the Prince appears to Belle Rose. To produce the smoke screen, steam from the boilers is piped over a container of 'Drikold' concealed behind a ramp on the centre of the stage*

Answer to petrol rationing. *A specially adapted car being loaded with canisters containing butane fuel produced at Wilton. Cheaper than petrol, it may be used even now that petrol rationing has ended to run some of the Wilton fleet of cars*

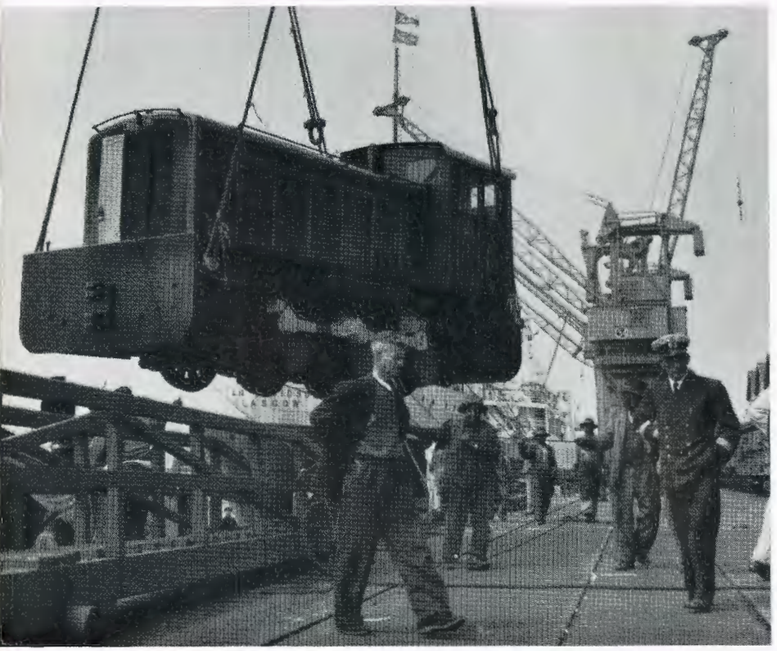
PICTURES FROM OVERSEAS

Ceylon. *A over the Kw Pictures film on location in Westminster up by*

Japanese troop train crashes into the river as the bridge ai River is sabotaged—a still from the new Columbia on the building of the Burma-Siam "death railway" shot Ceylon. Above: the timber bridge, longer than London's bridge, which was constructed for the film and blown Nobel Technical Service man Mr. David Brook

Egypt. *Mr. T. M. Milne, chairman of I.C.I. (Egypt) from 1953 until the Suez crisis last autumn, receives a 27 years' award from Sir Alexander Fleck for service in Japan, China, Indonesia and Egypt*

South Africa. *The famous Springbok cricketers Ken Viljoen (3rd fr. r.) and Jack Cheetham (extreme right) discuss the new experimental pitch laid down at A.E. & C.I.'s turf research station at Frankenwald near Johannesburg. The wicket is one of the "babies" of turf expert P. L. Machielse (left)*



South Africa. *New diesel-electric locomotive for A.E. & C.I.'s Somerset West factory takes the air at Table Bay docks, Capetown. Weighing 30 tons, it is the first of its type to be imported into South Africa. The new diesel, made by Ruston and Hornsby, bears the name "E. C. Rees," after a former factory manager at Somerset West. (Photo:* Cape Times)

Canada. *Uranium in the Blind River area of northern Ont group of mines will be capable of milling 9000 tons of ore a to extract the uranium from the ore, were obtained by Cana phuric acid unit at Copper Cliff, Ontario, has been authoris Hamilton,*

ario has recently held the mineral spotlight. The largest day. Contracts to supply sulphuric acid, which is used dian Industries Ltd., and construction of a second sul- ed. The company also manufactures sulphuric acid at Ontario

Argentine. *A party of chemistry graduates from Buenos Aires University on a two months' tour of Western Europe photographed outside Wilton Castle during a visit to Wilton Works and Billingham, where they were taken over the anhydrite mine. Later in London they broadcast their impressions of Britain and the chemical industry on the overseas news service of the B.B.C.*

I.C.I. NEWS

ROYAL VISIT TO METALS DIVISION

On 2nd May Kynoch Works was honoured by a visit from Her Majesty Queen Elizabeth, the Queen Mother. Her Majesty, accompanied by the Lord Mayor and Lady Mayoress of Birmingham, the Lord Lieutenant of Warwickshire and Lady Willoughby de Broke, and the High Sheriff of Warwickshire, arrived at the main entrance at 2.40 p.m. and was received in the new entrance hall to the General Offices by Dr. James Taylor (I.C.I. Director for Metals and Nobel Divisions) and Mr. M. J. S. Clapham (Joint Managing Director, Metals Division). Here she signed the visitors' book and showed great interest in an exhibit of titanium, which was explained to her by Dr. N. P. Inglis, the Division Research Director.

Mr. St. J. Elstub, O.B.E. (Joint Managing Director, Metals Division), Mr. T. G. Austin (Personnel Director, Metals Division), Mr. H. M. Myers, M.B.E. (Kynoch Works Manager), Messrs. A. H. Reincke (General Manager, Lightning Fasteners Ltd.), G. T. Meacham (Manager, Lightning Fastener Department), and D. O'Leary (Workers' Chairman of the Witton Works Council) were presented to Her Majesty.

In the Strip Mill the Queen Mother talked to the manager, Mr. F. R. Moseley, and several of the workpeople and watched the hot rolling of a slab of copper and progressive cold rolling of brass and copper strip. In the 'Lightning' Fastener factory she frequently stopped to chat with operatives and then drove through the works, where all roads were thronged with cheering employees.

Her Majesty's interested and charming manner made this an informal and very happy occasion.

(*Photo:* Birmingham Despatch and Mercury)

In the Witton strip mill the Queen Mother talks to Mr. St. J. Elstub, Joint Managing Director of Metals Division. The mill manager, Mr. F. R. Moseley, is behind the Lord Mayor. (*More pictures on page* 202.)

COVER GIRL

A number of readers have written to ask for the name, address and telephone number of the charming Mexican girl whose picture appeared on our March cover.

We have had to disappoint them, just as we had to disappoint the gentleman in East Africa who sent us a cutting from the *Magazine* showing some young ladies at Ardeer, with an arrow pointing at one of them with the annotation: "This one, please."

This time it is for a different reason: Mr. L. W. G. Drayton of Alkali Division, who took the picture, has no idea who the señorita is, although he well remembers photographing her.

PYRENEES TO LONDON—ON FOOT

One evening last month three Frenchmen known as "the three Etché"—they possess the unusual Basque names of Etchebarne, Etchegoyhen and Etcheberry—set foot in Parliament Square and so ended a thousand mile walk to London from Mauléon, a small town in the Pyrenees. The walk was a stunt organised by the French shoe firm of Bombard and Norby, the makers of Iowa Moccasin shoes.

One pair of Moccasin shoes each lasted the men for the whole journey, and this is where I.C.I. comes into the picture—as the supplier of rubber chemicals used in the soling material of these shoes.

This is the third year that such a walk has been organised but the first time outside France. The route from Mauléon was via Bordeaux and Le Mans to Le Havre and then from Southampton through Winchester and Basingstoke to London. The result—orders in France, where the stunt has received wide publicity, have been coming in for as many as 7000 pairs of Moccasins a day—has more than justified the venture, the organisers consider.

Back in Mauléon the three Etché, when not engaged in marathon walks, spend their time in less spectacular but equally active sports: one plays rugger, the others "pelotte," a game peculiar to the Basque countries which is something of a cross between squash and fives. (*Picture on page* 204.)

LONDON VISIT AS ESSAY PRIZE

As part of his prize for winning a safety essay competition Mr. W. Heap, a shift foreman at the Hillhouse factory of Plastics Division, spent two days in London with his wife at the Company's expense.

NEW APPOINTMENTS

Some recent appointments in I.C.I. are:

Dyestuffs Division

Mr. G. R. Underwood. Grangemouth Works Manager.
Mr. S. E. Blurton. Ellesmere Port Manager.
Mr. E. F. Whiteley. Production Manager (Colours).
Mr. J. L. Porter. Production Manager (Other Products).
Mr. A. S. Callaghan. Sales Manager, Products Sales Control Department.
Dr. J. Richardson. Sales Manager, Market Sales Control Department A.
Mr. J. D. Rigg. Sales Manager, Market Sales Control Department B.
Mr. T. L. de Fayer. Head of Intelligence Department.

Pharmaceuticals Division

Dr. W. G. Reid. Production Director.

Plant Protection Ltd..

Mr. H. Smith. A director.

The essay competition was organised by the "Safety Standard," a monthly safety journal for I.C.I. supervisors. Mr. Heap's essay was chosen as the best from an entry of 154. The runner-up was Mr. P. C. Fletcher, a Billingham shift foreman.

During their visit to London Mr. and Mrs. Heap toured the sights, visited Westminster Abbey, enjoyed a trip down the river, went shopping in the West End and saw the Crazy Gang show at the Victoria Palace. Mrs. Heap's enjoyment of the visit was sharpened by the fact that it was her first time in London.

On the first day of their stay they were introduced to

Mr. and Mrs. Heap step out in London

NEWS IN BRIEF

LONG-SERVICE DIRECTORS. Mr. E. A. Bingen and Mr. C. R. Prichard, I.C.I. Overseas Directors, received 30-year service awards from Sir Alexander Fleck at a ceremony at Head Office on 25th April. Seventy other people received awards.

END OF AN ERA. Nobel Division's Denton Wharf, a sailing barge depot on the Thames at Gravesend, is to close at the end of July.

THE QUEEN'S "DAUPHINE." The new Renault "Dauphine" presented to the Queen during her recent visit to France is finished in 'Hilux' Blue, a Paints Division product. The car was manufactured at the Renault works in England, where all right-hand drive models are built.

SPASTICS CAMP. Plastics Division have given the Tonbridge and District Boy Scouts Association 1000 ft. of 'Alkathene' tubing so that they can lay on water to a camp site which is used by scouts and guides from a nearby school for spastics.

NEW 'PROCION' DYES. The range of 'Procion' dyestuffs introduced last year and used principally for dyeing and printing cellulosic fibres has been increased from four colours to ten. The new colours are a bright greenish yellow, a brilliant red, a reddish blue, a bright turquoise and two brilliant greens.

ANOTHER ARDEER. Seven and a half miles from the city of Melbourne in Australia is a new suburb bearing the name of Ardeer. Numbered among the 3000-odd inhabitants are several I.C.I.A.N.Z. Deer Park employees and their families.

ALL-TIME RECORD. Production of C.C.F. fertilizer at Billingham last year was an all-time record, and to mark the achievement a dinner for Products Works Phosphate Section personnel was held on 12th April.

FIVERS. The issue of new £5 notes in wage packets at Wilton has produced little reaction either inside or outside the works, according to Wilton's chief accountant. Only one complaint about the fivers was voiced at the recent Site Council meeting—that there were not enough of them!

GOLD MEDAL. At the 33rd All-India Medical Conference and Exhibition held in Trivandrum, the I.C.I. stand was awarded a gold medal. 'Mysoline,' a drug for epilepsy, was chosen for the special display.

RODIA TAKES SHAPE. The new A.E. & C.I. fertilizer factory now under construction at Rodia, near Salisbury in Southern Rhodesia, will be the largest industrial undertaking in the Central African Federation.

SINGER'S TWO SUCCESSES. A wages clerk at Prudhoe Factory, Mr. Sydney Brooks, gained second place in the open baritone class and, with a friend, was first in the open duet contest at the recent Hexham Music Festival, which drew competitors from all over the north-east.

SOUTH WALES TITANIUM PLANT. The first unit of the sheet rolling equipment, together with electric furnaces, is now operating at the new £2m. titanium fabrication works under construction at Waunarlwydd, Swansea.

STILL GROWING. To keep pace with developments a further 1200 employees will be needed at Wilton this year. At the moment there are 8300 I.C.I. employees on the site and 3700 contractors' men.

HALF-CENTURY. Miss Jean Leishman, of the Detonator Department, Ardeer, has retired after 50 years and 8 months' service. During all this time she was never late for work and handled some 1000 million detonators.

Mr. R. A. Banks, I.C.I. Personnel Director. Mr. Banks congratulated Mr. Heap on the excellence of his essay, "Safety and the Supervisor," and presented him with £10 in cash.

HEAD OFFICE

Deputy Treasurer Retires

Mr. A. J. Steward, I.C.I. Deputy Treasurer, has retired after nearly 28 years' service with the Company. He is succeeded by Mr. A. E. Frost and Mr. S. W. Weysom.

Mr. A. J. Steward

A colleague writes:

The Company has lost through the retirement of Alan Steward one of the outstanding figures in its financial organisation, who had been intimately associated with it since its formation in 1926. Although he did not join the staff of the Treasurer's Department until 1929 he had been the departmental manager with Messrs. Thomson McLintock & Co. charged with the responsibility for the I.C.I. audit and previously the audit of Nobel Industries Ltd.

At the outset of his career he was destined for the Army as a regular soldier. He went through the "Shop" at Woolwich before serving in the 1914–18 war, in which he won a double M.C. At the end of that war he decided to change over to a commercial career and qualified as a chartered accountant. He remained on the Regular Army Reserve of Officers, however, and was called up in the summer of 1939, subsequently commanding a battery of medium artillery in the B.E.F. until, following the Dunkirk evacuation, he returned to the service of the Company.

Those of us who know him realise only too well what a gap his leaving has brought about. His knowledge of events over more than thirty years and his prodigious memory constituted a unique source of strength. He was always willing to place his vast experience and knowledge at the disposal of anybody in any part of the organisation, and no one who went to Alan Steward for advice or guidance on any subject came away unrewarded. It cannot be said that he suffered fools gladly or that he was tolerant of inefficiency or inaccuracy; indeed, he had an almost uncanny aptitude for discovering any error which might have crept into any document which came in front of him. Many men who have since climbed up the promotion ladder know and appreciate how much they owe to the encouragement "A.J." gave them in their earlier years.

CARIBBEAN ZONE

Mr. W. de M. Clarke Retires

Mr. W. de M. Clarke retires from the Caribbean Zone Agency Inspectorate on 30th June, relinquishing the post of manager which he has held for 22 years. He is succeeded by Mr. G. Lilly-white, formerly manager of I.C.I. (Sudan) Ltd.

Mr. W. de M. Clarke

Born near Walsall in 1897, Mr. Clarke's early childhood was spent in Chile; he returned to England to school and joined the Royal Navy as a cadet in 1910. He saw war service at sea in H.M. ships *Majestic*, *Erin* and *Oak* and in submarines. Injuries received in an explosion in one of the submarines terminated Mr. Clarke's naval career in 1919, and he returned to Chile to join the firm of Graham Rowe & Co., agents for Brunner-Mond and the United Alkali Co. In 1928 he joined I.C.I., later becoming managing director of I.C.I. Peru.

In 1934 Mr. Clarke and Mr. W. S. Vorley spent seven months conducting a market survey of the Caribbean countries, as a result of which the Caribbean Zone Agency Inspectorate was formed in 1935 in Kingston, Jamaica, with Mr. Clarke as manager. His tenure of this post was broken in 1939, when he was recalled to the Navy, serving in Jamaica until the end of the war, when he retired with the rank of Commander.

I.C.I.'s post-war expansion of trade in the Caribbean has brought new responsibilities for the Inspectorate, and the staff of the Jamaica office has been much increased. Today's network of air services radiating outwards from Jamaica is in great contrast to Mr. Clarke's early days in the Caribbean, when tours of inspection with only unreliable coastal shipping services and the local railways to depend on took months to complete.

I.C.I. (INDIA) PRIVATE

Metric Complications

Harassed people throughout India these days can be seen mouthing such verses as this:

For one take six,
For two twice six;
In terms of six for three and four,
Multiply and add one more.
Remember the simple rule,
First total, then round off
To change from old to new.

It is one of the incantations which the government hope will help people to cope with the metric money which came into force on 1st April. The rupee is now divided into 100 naye paise instead of 16 annas each worth 12 pies.

The shortage of the new coins, which will probably not be overcome until 1958, means that the new coinage and the old will circulate side by side until March 1960, and complicated arrangements have had to be made in I.C.I. (India)'s cash and accounting departments to deal with the situation. The staff has been taught how to record entries in the new currency in books of account, cheques and invoices, and steps have been taken to convert all the accounting machines. This conversion is likely to be a prolonged affair, however, as most of the necessary parts have to be imported and the Government and the banks are getting priority.

All contracts, deeds and agreements entered into after 1st April indicate the amount in rupees and naye paise; this means that new price lists for the Company's entire range of products have had to be issued. Sales invoices, customer's ledger accounts and bank paying-in slips have been provided with columns to show the values in both currencies. All the Company's official accounts for the year ending 30th September 1957 will be in the new currency.

* * *

OUR NEXT ISSUE

The words "Office Administration Department" are perhaps not a very inspiring name, and it may be for this reason that the Company's not inconsiderable achievements in the reorganisation of office work—a field where they are among the acknowledged leaders in industry—have not received as much publicity as they deserve. The *Magazine* therefore invited the No. 2 in the Office Administration Department, Peter Ricardo, to write a brief description of O.A.D.'s approach to office problems, citing some examples of successful reorganisations.

Our chief colour feature comes from Malaya, where Dr. C. B. Taylor, formerly of Billingham Division and Akers Research Laboratories, is in charge of the Agricultural Advisory Department of I.C.I. (Malaya) Ltd. He has written for the *Magazine* an outstandingly vivid description of the Malayan rubber industry, illustrated by some good colour photographs.

To wind up we have an amusing piece from Herbert Watkin, a maintenance fitter at Wallerscote Works, Alkali Division. He tells a story of what it is like to run a holiday camp in North Wales under the auspices of the Alkali Division Children of the Unemployed (Assistance) Fund.

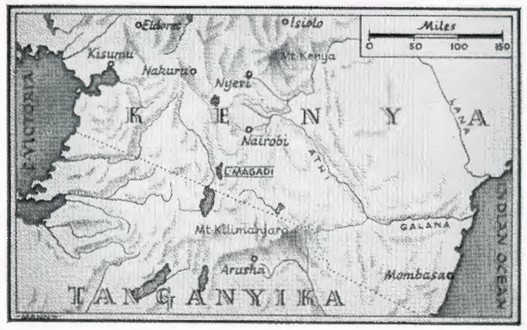
Life at Magadi

By W. H. Billington

Colour photographs by E. J. Langford and Dr. G. I. Robertson

No roads, no recreation, no refrigerators—that was the picture when the author arrived at the small community beside Lake Magadi in Kenya where soda ash is extracted from the lake by I.C.I.'s Magadi Soda Company. When he left 26 years later all sorts of amenities had been added, but the primitive Africa around remained the same.

LAKE Magadi lies at the bottom of the Rift Valley in Kenya, 4000 ft. below the hills and plateaus on either side, the walls of the valley a succession of escarpments and cliffs of lava. It is a lake of 36 square miles of crystal soda, gleaming white or pearly grey and pink for most of the year, but in the infrequent rains covered with a sheet of soda liquor giving lovely reflections. On one side is the factory and township of the Magadi Soda Company: all around, as far as the eye can see, just untouched Africa.



I first arrived by train, in a little four-wheeled coach at the end of a long train of soda empties. In those days it was the only way to arrive. There were no roads to Magadi and no roads which could be called roads in Magadi itself.

My first impression was of heat, glare and barrenness. That, I think, is still the impression of people who arrive at Magadi in the heat of the day from the cool of Nairobi. Magadi is hot—hotter at some seasons than others—but it is always hot and very rarely green. But this is only part of the picture. In the evening, when the white lake lies with an unearthly quiet below cliffs of red and brown, the forested mountain slopes above, blue and purple, and the flaming, golden sunset over all, Magadi is beautiful; and so are the changing patterns of light and shade to the north and south.

We had begun to make a few roads over which it was possible to drive a car, and the first motor cars—"flivvers" with a high clearance—were brought to Magadi by rail. Cars made a great difference to life; it was easier to get out into the surrounding country,

Lake Magadi, *thirty-six square miles of crystal soda, is the reason for the Magadi Soda Company's existence. Usually gleaming white or pearly grey and pink, it is covered with a reflecting sheet of soda liquor after rain.*

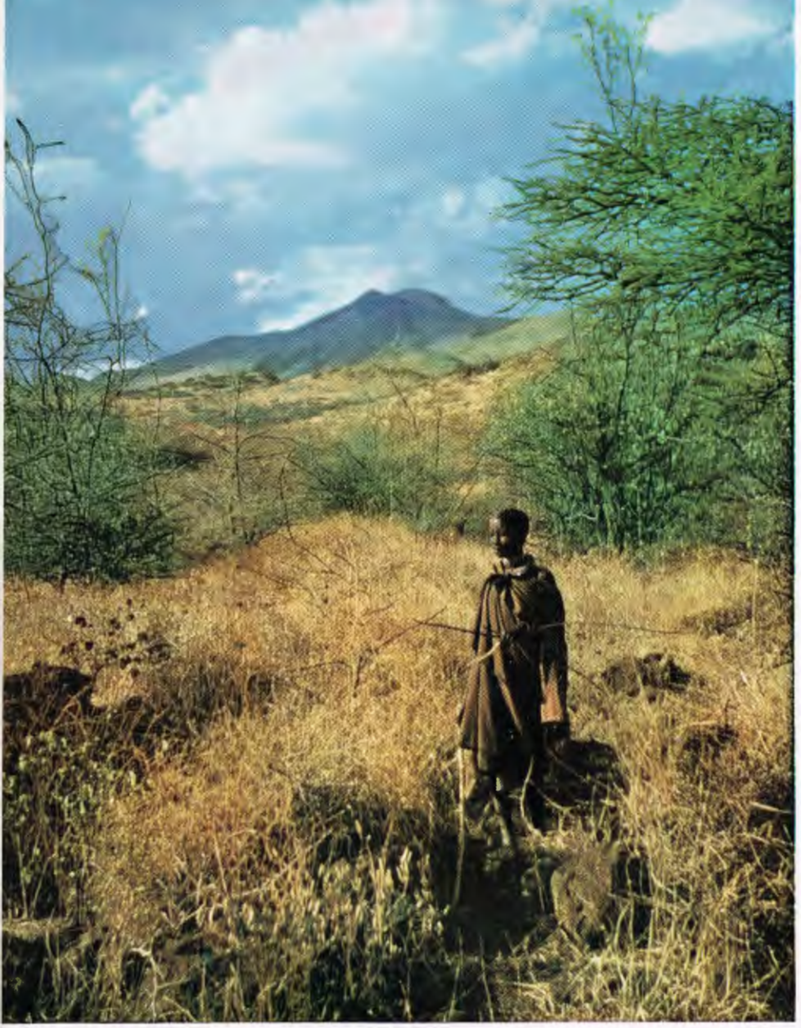
and as we pushed the tracks further out it became obvious that we would have to make a road to Nairobi and end our dependence on the slow rail journey, which took a day at the best of times and was a hot, dusty misery.

Magadi was poor in those days and there was little money for road-making; there were no maps, and a route had to be found up and round the rocky escarpments and mountainsides, over the valleys and watercourses until it reached the high plains, 3000 ft. or so above the floor of the valley. It was a slow, laborious job, as all the work was done without mechanical aids and with much trial and error in finding ways through; but it was good fun and I was lucky enough to take some part in it.

At last it was through and a car could get to Nairobi. It was no Autobahn, but what a difference it made to life! Each year it improved, though with many setbacks, until it became commonplace to leave Magadi after breakfast for a day's business or shopping and return comfortably in time for a bath and dinner. Friends and visitors could drive down; indeed, cars became quite a nuisance on the road.

Other things improved—the houses, the club, the swimming pool; domestic refrigerators, which meant that fruit and vegetables, milk and butter (and drinks) could be kept cool, and meat need not be eaten the day it was killed. Ceiling fans replaced those noisy, infuriating little table fans that blew a miniature tornado straight into your face or passed you by to swelter. How well too I remember the first radio sets that really worked: to turn a knob and listen to music—music not limited to our own few gramophone records; and news—news of the day, not news weeks old to which we had become inured.

We began to make gardens, not gardens of smooth lawns, shady trees, rose beds and banks of flowers, but still gardens, little patches of zinnia or balsam and one or two shrubs, carefully tended and watered, as often as not with the bath water. Water was scarce



A herdsman *of the primitive but friendly Masai tribe, whose reserve surrounds the lake. He would have no hesitation in attacking a lion to defend his cattle.*

rhino; to see a couple of lion or get a quick glimpse of a leopard. Dangerous? Not really, unless you start letting off firearms. I only shot one animal at Magadi, and that was a leopard in the factory.

The Masai, those proud warriors who pasture their flocks in this inhospitable country, unhesitatingly attack lion in defence of their cattle, their only weapons a slender spear and a long knife. When they are mauled, they sometimes pin the edges of the wound together with long thin acacia thorns, and a very neat job they make of it.

What of the people in Magadi itself? There are Africans and Asians as well as Europeans; all have to make some adjustments to the life of the community, and they interact on one another. They are all, or nearly all, employees of the Company, and the Company not only pays the wages but provides the houses, the health service and much else. Only after I left Magadi did I realise how much the Company does enter into one's life there.

I do not think the people at Magadi differed in any way from people elsewhere except perhaps for more kindness and ready help—we were all in the same ship. Of course there was gossip and there was bickering, and we knew each other's foibles well enough to spice the gossip.

Many changes took place at Magadi while I was there and life became easier in many ways; but Magadi itself did not change. The Nguruman range still dominated the west, Suswa could still be seen to the north and Shombole to the south; the same white plumes of soda dust still drifted from the calciner chimneys above the red mass of the factory; the pervading colour was still khaki, and it was still hot.

I suppose it *was* an odd place to have lived in for so long. When I am asked however I managed to live there, I usually reply that you have to be a little mad and then it is all right. Now I find myself going to London by the same train every day, pushed and jostled by milling crowds, and see the same people each night, pushing and being pushed into overcrowded trains, and it seems to me perhaps it is not a bad thing to be a little mad anyway.

(it was piped ninety miles), and the soil was mainly dust and lava and silica chert; but what pleasure they gave us, with what pride we surveyed the little patches of colour we had created!

No picture of Magadi would be complete without at least a glance at the game: a herd of impala sailing along in five-foot-high leaps—up and up and up again; giraffe browsing the tops of the trees or cantering across the plain, rocking horses on stilts; pot-bellied zebra; ostrich running away with half-opened wings and a silly sideways jink and flirt of the tail, like a ballet dancer playing the fool. What a constant pleasure they are: or, if it so chanced, to see a herd of buffalo emerging from the bush or the great bulk of a

Giraffe, *impala, zebra, ostrich, buffalo, rhino, lion and leopard abound in the bush. A member of the Magadi staff having his evening game of golf was once watched with polite interest by two lions.* BELOW: **Dirt roads** *connect Magadi with the outside world. This one runs south to Shombole, another leads to Nairobi, 70 miles away. Magadi also has its own airstrip, and it is cheap and quick to fly from there to Nairobi.*

"Close Hauled"

Photo by K. Deutsch